The Commonwealth of Massachusetts

DEPARTMENT OF
TELECOMMUNICATIONS AND ENERGY

D.T.E. 03-26 April 22, 2005

Investigation by the Department of Telecommunications and Energy, pursuant to G.L. c. 25, § 19 and G.L. c. 25A, § 11G, of Fitchburg Gas and Electric Light Company petition for approval of 2001 and 2002 demand side management performance incentives.

---

APPEARANCES: Meabh Purcell, Esq.
LeBoeuf, Lamb, Greene & MacRae, L.L.P.
260 Franklin Street
Boston, Massachusetts 02110
FOR: FITCHBURG GAS AND ELECTRIC LIGHT COMPANY
Petitioner

Steven I. Venezia, Esq.
Commonwealth of Massachusetts
Division of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114
FOR: DIVISION OF ENERGY RESOURCES
Intervenor

## I. INTRODUCTION

On February 4, 2003 and March 27, 2003, Fitchburg Gas and Electric Light Company ("Fitchburg" or "Company"), pursuant to G.L. c. 25, § 19, and G.L. c. 25A, § 11G, filed with the Department of Telecommunications and Energy ("Department") energy efficiency performance incentive reconciliation reports ("Reports") for 2001 and 2002 respectively. The Reports use quantitative analyses to assess energy and capacity savings resulting from the implementation of Fitchburg's energy efficiency plan approved by the Department in Fitchburg Gas and Electric Light Company, D.T.E. 98-48/49 (Phase II) (2001). The Reports also include calculations of shareholder incentives based upon each year's savings. The Company's petition was docketed as D.T.E. 03-26.

On April 7, 2003, the Department issued a notice requesting public comments and participation on Fitchburg's filing. The Department granted the petition for leave to intervene of the Commonwealth of Massachusetts Division of Energy Resources ("DOER"). On its own motion, the Department moves into the record of this proceeding the Company's two exhibits[1] as well as Fitchburg's responses to 39 Department information requests.[2]

---

1 The Company pre-marked exhibits are as follows: (1) Energy Efficiency Programs–2001 Performance Incentive Reconciliation (Exh. FGE-1); (2) Energy Efficiency Programs–2002 Performance Incentive Reconciliation (Exh. FGE-2).

2 Pursuant to 220 C.M.R. § 1.10(3), the Department incorporates by reference the Company's Annual Energy Efficiency Report for 2001, dated August 5, 2002 ("2001 Annual Report"); and the Company's Annual Energy Efficiency Report for 2002, dated August 1, 2003 ("2002 Annual Report"). The Company's Annual Energy Efficiency Reports are filed pursuant to Order Promulgating Final Guidelines: D.T.E. 98-100, Att. 1 (2000): Guidelines for the Methods and Procedures for the Evaluation and Approval of Energy Efficiency Programs, § 4.2.2.

## II. STANDARD OF REVIEW

The Department is required to review and approve expenditures for ratepayer-funded energy efficiency programs after ensuring that such programs were implemented in a cost-effective manner using competitive procurement processes to the maximum extent practicable. G.L. c. 25, § 19; G.L. c. 25A, § 11G. The Department has established guidelines that, among other things, set forth the manner in which the Department will review and approve ratepayer-funded energy efficiency plans in coordination with DOER, pursuant to G.L. c. 25, § 19 and G.L. c. 25A, § 11G. Order Promulgating Final Guidelines to Evaluate and Approve Energy Efficiency Programs, D.T.E. 98-100, Att. 1 ("Guidelines for the Methods and Procedures for the Evaluation and Approval of Energy Efficiency Programs") (2000) ("Guidelines"). The Guidelines apply to all distribution companies and to all municipal aggregators that file municipal energy plans for Department evaluation and approval. Guidelines at § 1.[3]

Energy efficiency programs are deemed cost-effective if their benefits are equal to or greater than their costs, as expressed in present value terms. Guidelines at § 3.5. The Guidelines also specify the criteria employed by the Department to determine whether an

---

[3] A municipal aggregator is any municipality or group of municipalities that aggregates the electric load of interested electricity consumers within its boundaries, pursuant to G.L. c. 164, § 134(a). Guidelines at § 2(9). Municipal energy plans are energy efficiency plans filed with the Department by municipal aggregators pursuant to G.L c. 164, § 134(b). Id. at § 2(1); see Cape Light Compact, D.T.E. 00-47-C (2001).

energy efficiency program will be cost-effective. Id. at §§ 3, 4.2.1.[4] With respect to evaluations of the savings achieved by energy efficiency programs, the Guidelines provide that

> All such evaluations shall be reviewable, appropriate, and reliable, consistent with Department precedent concerning these terms. A variety of evaluation and assessment methods are appropriate, depending on the nature of the programs and markets being addressed. Reliable evaluations are sufficiently unbiased and sufficiently precise.

Id. at § 4.2.2(a); see Massachusetts Electric Company, D.P.U. 92-217-B at 4-6 (1994); Boston Edison Company, D.P.U. 96-1-CC (1996); Boston Gas Company, D.P.U. 94-15 (1995).

In addition, the Guidelines specify the method for the calculation of shareholder incentives that may result from the implementation of energy efficiency programs. Id. at § 5. Each distribution company must establish design performance levels they expect to achieve in their energy efficiency plans. Id. at § 5.2. Design performance levels are expressed in levels of savings in energy, commodity and capacity, and in other measures of performance as appropriate. Id. Shareholder incentives are calculated based upon these performance levels. Id. at § 5.3.

---

4 For evaluating cost-effectiveness, the Guidelines adopted a "Total Resource Test," which includes only those program implementation benefits and costs that are directly incurred by distribution companies and program participants. Guidelines at § 3.2.

## III. FITCHBURG'S PROGRAMS AND SAVINGS

### A. Residential Programs

#### 1. Description

During the Company's 2001 and 2002 program years, Fitchburg offered combinations of the following residential programs: Energy Star Homes; Energy Star Appliances; Energy Star Lighting; Energy Star Trade-In; Residential Efficiency; and Residential Conservation Service (Exhs. FGE-1, exh. 1; FGE-2, exh. 1).[5] The Company stated that these residential programs focused primarily on lighting, clothes washers, room air conditioners, and home energy assessments (Exhs. FGE-1, exh. 1, at 1-2; FGE-2, exh. 1, at 1-2). With respect to low-income programs, the Company indicated that three low-income programs were offered in 2001 while two such programs were offered in 2002 (Exhs. FGE-1, exh. 1, at 2; FGE-2, exh. 1, at 2). The Company stated that these programs involved: (1) outreach to low-income customers; (2) software development; and (3) training for the Company's customer service representatives in terms of low-income programs (Exhs. FGE-1, exh. 1, at 2; FGE-2, exh. 1, at 2 and exh. 2, at 1).

---

5 The Company identified Energy Star Homes, Energy Star Lighting, Energy Star Appliances, and Energy Star Trade-In as market transformation programs (Exhs. FGE-1, at I-2; DTE 1-2a; 1-7a). Market transformation programs are strategic efforts to offset market failures and to induce lasting changes that result in the adoption or penetration of energy efficient technologies and practices. D.T.E. 98-100, at 28 n.22 (1999); Guidelines at § 4.2.1(b).

2. Methods for Evaluating Residential Savings

Fitchburg evaluated its residential programs using methods including: (1) billing history analyses; (2) analysis of data submitted by vendors; (3) customer and retailer surveys; and (4) on-site inspections (Exhs. DTE 3-1; 2-2; 1-7a; 1-2a; 2001 Annual Report at 1-6; 2002 Annual Report at 1-6). In addition, the Company reported that residential lighting and appliance savings estimates were adjusted with baseline and spillover data obtained from NSTAR (2001 Annual Report at 11; 2002 Annual Report at 11).

3. Results of Evaluation Methods

Based on the results of evaluations, Fitchburg reported that its residential and low-income programs would save 11,205 megawatt-hours ("MWH") over the lifetimes of the measures installed in 2001, and 14,095 MWH over the lifetimes of the measures installed in 2002 (2001 Annual Report at Table S; 2002 Annual Report at Table S). Fitchburg also reported 46 kilowatts ("KW") in capacity savings in 2001 and 64 KW of such savings in 2002 (2001 Annual Report at Table S; 2002 Annual Report at Table S).

4. Analysis and Findings

The Department reviews an electric company's evaluations to determine whether the evaluations are reviewable, appropriate, and reliable. Guidelines at § 4.2.2. Fitchburg's residential evaluations were sufficiently explained with adequate supporting documentation (Exhs. DTE 3-1; 2-2; 1-7a; 1-2a; 2001 Annual Report at 1-6; 2002 Annual Report at 1-6). Accordingly, the Department finds Fitchburg's residential evaluations to be reviewable.

With respect to the appropriateness of Fitchburg's residential evaluations, Fitchburg used methods such as billing analyses and customer surveys. Such methods are consistent with Department precedent. Massachusetts Electric Company, D.P.U. 92-217-B at 9-16 (1994). Accordingly, the Department finds Fitchburg's residential evaluations to be appropriate.

The reliability of an evaluation concerns whether it is sufficiently unbiased and sufficiently precise. Guidelines at § 4.2.2. Fitchburg used methods such as billing history analysis with random sampling and factors such as spill-over were taken into account (see Exhs. DTE 3-1; 2-2; 1-7a; 1-2a; 2001 Annual Report at 1-6; 2002 Annual Report at 1-6). Accordingly, Fitchburg's residential evaluations accounted sufficiently for bias.

With respect to precision, the Department recognizes that a majority of Fitchburg programs were market transformation programs. As noted in the Guidelines, the results of such programs may not lend themselves to statistical precision. Guidelines § 4.2.2(b). However, the Company's single largest residential savings achievement is the savings attributed to efficient lighting (2001 Annual Report at Table 6A; 2002 Annual Report at Table 6A). Fitchburg's residential efficient lighting program can be evaluated statistically. While the lack of statistical evidence associated with Fitchburg's efficient lighting program is of concern to us, we recognize that the Company is relatively small in comparison to other Massachusetts electric distribution companies, and has fewer resources available to perform the level of analysis necessary to demonstrate statistical precision. See D.P.U. 92-217-B at 5-6 ("[t]he Department will accept savings estimates if it can be determined that they are sufficiently unbiased and sufficiently precise, given the nature of the program, the company's resources, and the costs and value of obtaining better precision."). Given the Company's comparatively small residential energy efficiency programs versus those of other Massachusetts electric distribution companies, and the small amount that Fitchburg seeks to recover as a performance incentive, the Department will accept the results of the Company's evaluation in this proceeding. However, the Department directs Fitchburg on a going-forward basis to produce evidence of statistical precision for all applicable residential programs (i.e., non-market transformation programs). Failure to do so in the future may result in the disallowance of demand-side management incentives.[6]

## B. Commercial and Industrial Programs

### 1. Description

During the 2001 and 2002 program years, Fitchburg offered the following commercial and industrial ("C&I") programs: (1) Small C&I and (2) Comprehensive Efficiency (Exhs. FGE-1, at 1-2; FGE-2, at 1-3). The Company stated that these programs focused primarily on lighting, motor, and heating, ventilation, and air conditioning ("HVAC") equipment (Exhs. FGE-1, exh. 1; FGE-2, exh. 1).[7]

---

6 In addition, savings has been identified as a major factor in determining the level of Fitchburg's shareholder incentive payments. Fitchburg Gas and Electric Light Company, D.T.E. 03-44, at 13 (2003); Fitchburg Gas and Electric Light Company, D.T.E. 04-27, at 9 (2004).

7 The Company also participated in statewide and regional C&I programs including Premium Efficiency Motors, HVAC Efficiency, Design Lights, Building Codes, Facility Operations Training, and Compressed Air Operations Training (Exhs. FGE-1, exh. 1; FGE-2, exh. 1).

2. Methods for Evaluating C&I Savings

Fitchburg evaluated its C&I programs using engineering estimates, end-use metering, and on-site inspections (Exhs. DTE 3-1; 2-4; 2001 Annual Report at 7-8; 2002 Annual Report at 6-7). In addition, the Company reported that adjustments were made to C&I motor and HVAC savings estimates based on baseline and spillover data obtained from NSTAR (2001 Annual Report at 11; 2002 Annual Report at 11).

3. Results of Evaluation Methods

Based on the results of evaluations, Fitchburg reported that its C&I programs would save 40,710 MWH over the lifetimes of the measures installed in 2001, and 24,529 MWH over the lifetimes of the measures installed in 2002 (2001 Annual Report at Table S; 2002 Annual Report at Table S). Fitchburg also reported 455 KW in capacity savings in 2001, and 257 KW in 2002 (2001 Annual Report at Table S; 2002 Annual Report at Table S).

4. Analysis and Findings

The Department reviews an electric company's evaluations to determine whether its evaluations are reviewable, appropriate, and reliable. Guidelines at § 4.2.2. Fitchburg's C&I evaluations were complete and clearly presented. Therefore, the Department finds Fitchburg's C&I evaluations to be reviewable.

With respect to the appropriateness of Fitchburg's C&I evaluations, the Department notes that Fitchburg used methods such as engineering estimates, end-use metering, and on-site inspections. Such methods are consistent with Department precedent. D.P.U. 92-217-B at 9-16. Therefore, the Department finds Fitchburg's C&I evaluations to be appropriate.

The reliability of an evaluation concerns whether it is sufficiently unbiased and sufficiently precise. Guidelines at § 4.2.2; D.P.U. 92-217-B at 4-6. The Department notes that Fitchburg used appropriate methods such as engineering estimates, end-use metering, and on-site inspections (Exh. DTE 2-4; 2001 Annual Report at 7-8; 2002 Annual Report at 6-7). Accordingly, Fitchburg's C&I evaluations controlled sufficiently for bias.

With respect to precision, the Department recognizes that Fitchburg's largest savings achievement is the savings attributed to the Company's HVAC program (2001 Annual Report at Table 6A; 2002 Annual Report at Table 6A). Fitchburg's HVAC program can be evaluated in terms of statistical precision (id.). As noted above, while the lack of statistical evidence associated with Fitchburg's HVAC program is of concern to us, we acknowledge that Fitchburg is relatively small compared to other Massachusetts electric distribution companies, and has fewer resources available to perform the level of analysis necessary to demonstrate statistical precision. See D.P.U. 92-217-B at 5-6. Given the relatively small amount that the Company seeks to recover as a performance incentive, the Department will accept the results of Fitchburg's evaluation in this proceeding. However, the Department directs Fitchburg on a going-forward basis to produce evidence of statistical precision for all applicable C&I programs (i.e., non-market transformation programs). Failure to do so in the future may result in the disallowance of demand-side management incentives.

## IV. COST-EFFECTIVENESS

### A. Introduction

The Department is charged with determining the cost-effectiveness of an electric company's energy efficiency programs. G.L. c. 25A, § 11G; Guidelines at §§ 3, 4. First, the Department reviews the pre-implementation cost-effectiveness of an electric company's energy efficiency programs. Guidelines at §§ 3, 4. After implementation, the Department must again review these energy efficiency programs to determine their actual cost-effectiveness. G.L. c. 25A, § 11G; Guidelines at §§ 3, 4. In this proceeding, the Department reviews the post-implementation benefits and costs of Fitchburg's 2001 and 2002 energy efficiency programs to determine their actual cost-effectiveness.

An energy efficiency program is considered to be cost-effective if its benefits are equal to or greater than its costs in present value terms. Guidelines at § 3.5. Benefits consist of avoided electric energy and generating capacity costs, avoided transmission and distribution costs, and beginning in the 2000, certain other utility and participant benefits such as reduced late payment charges, reduced operation and maintenance costs, and reduced consumption of water and fuels. Guidelines at §§ 3.3.2, 3.3.3.

The Department reviewed the savings estimates attributable to Fitchburg's 2001 and 2002 energy efficiency programs and finds these to be acceptable (Exhs. FGE-1, exh. 1; FGE-2, exh. 1). Savings are a key component of the Department's cost-effectiveness test because the benefits used in the benefit-cost ("B/C") method are derived from savings.

Costs of energy efficiency programs consists of payments to vendors for equipment and services, payments to installers, rebates to participants, verification costs, costs to plan, administer, market, and evaluate programs, and shareholder incentives. Guidelines at § 3.2.2. In this proceeding, Fitchburg reported the final costs attributable to its 2001 and 2002 energy efficiency programs.

B. Residential Programs

Fitchburg stated that its residential programs and low-income programs cost $543,000 in 2001 and $510,000 in 2002 (Annual Report at Table S; 2002 Annual Report at Table S). Based on its post-implementation evaluations, Fitchburg reported present value benefits of $782,000 for 2001 and $1,055,000 for 2002 (Annual Report at Table S; 2002 Annual Report at Table S). Consequently, Fitchburg reported overall residential and low-income B/C ratios of 1.4 for 2001 and 2.1 for 2002 (Annual Report, Table S; 2002 Annual Report, Table S).

Fitchburg reported that its individual residential and low-income programs achieved post-implementation B/C ratios of 1.00 or higher except for the (1) 2001 Energy Star Trade-In Program; (2) 2001 and 2002 Energy Star Appliance Program; (3) 2001 Energy Star Homes Program; (4) 2001 and 2002 Residential Conservation Service ("RCS") Program; and (5) 2002 Residential Efficiency Program (Exhs. DTE 2-11; DTE 2-12).[8]

---

8 With respect to the 2001 Energy Star Trade-In Program, the Company stated that this program was introduced late in 2001 and, as a consequence, start-up costs exceeded savings during that time period (Exhs. DTE 2-11; DTE 2-12). With respect to the 2001 Energy Star Homes program, the Company stated that in 2001 no homes in its service territory were built to Energy Star standards (Exh. DTE 2-11; 2001 Annual Report at 4).

C. C&I Programs

Fitchburg stated its C&I programs cost $907,000 in 2001 and $591,000 in 2002 (2001 Annual Report at Table S; 2002 Annual Report at Table S). Based on the Company's final evaluations, Fitchburg reported that the present value of lifetime savings for C&I measures for 2001 of $1,992,000 and $1,258,000 for 2002 (2001 Annual Report at Table S; 2002 Annual Report at Table S). Fitchburg reported over-all post-implementation B/C ratios of 2.2 for 2001 and 2.1 for 2002 for its C&I programs (2001 Annual Report at Table S; 2002 Annual Report at Table S). With respect to individual C&I programs, Fitchburg represented that each of its C&I programs achieved cost-effectiveness in 2001 and 2002 (Exhs. DTE 2-11; DTE 2-12).

D. Analysis and Findings

With respect to the Company's residential programs, the Department notes that five of Fitchburg's residential energy efficiency programs failed to achieve cost-effectiveness during one or both years of the 2001-2002 period. However, the Department recognizes that the Company's Energy Star Trade-In program started in the latter part of 2001 and that benefits under Fitchburg's Energy Star Homes program are dependent on particular and sporadic construction decisions (Exhs. FGE-1, exh. 1; FGE-2, exh. 1).

Nonetheless, the Department is concerned with programs that are not cost-effective, in particular the Company's RCS program, which failed to reach cost-effectiveness in 2001 and again in 2002. The Department requires that (1) the expected benefits of the savings achieved by a company's energy efficiency programs exceed the costs and (2) programs that fail to achieve this standard be modified or discontinued. Fitchburg Gas and Electric Light Company, D.T.E. 98-48/49 (Phase II) at 3 (February 27, 2002) citing Guidelines at §§ 3.5, 4.2.2(a). In the past, the Department has directed a distribution company to improve the cost-effectiveness of its RCS program. Massachusetts Electric Company, D.T.E. 00-65-A at 5 (2002). Accordingly, the Department directs Fitchburg, in consultation with the DOER, to improve the cost-effectiveness of its RCS program.

Based on the record in this proceeding the Department finds Fitchburg's energy efficiency programs to be cost-effective except for the following programs: 2001 Energy Star Trade-In, 2001 and 2002 Energy Star Appliance, 2001 Energy Star Homes, 2001 and 2002 RCS, and the 2002 Residential Efficiency.

## V. SHAREHOLDER INCENTIVES

Fitchburg claimed a shareholder incentive payment of $73,315 and $80,840, for 2001 and 2002, respectively (Exhs. FGE-1, at I-3; FGE-2, at I-4). Fitchburg noted that its 2001 and 2002 performance incentives are supported by the Low-Income Energy Affordability Network and the Northeast Energy Efficiency Council in an offer of settlement approved by the Department (Exhs. FGE-1, at I-1; FGE-2, at I-1, citing Fitchburg Gas and Electric Light Company, D.T.E. 98-48/49-A (Phase II) (2003)).[9] Fitchburg stated that its 2001 and 2002 shareholder incentive payments have been calculated in a manner consistent with the method specified in D.T.E. 98-48/49-A (Phase II) and with the Guidelines (Exhs. FGE-1, at I-2;

---

[9] In D.T.E. 98-48/49 (Phase II) at 5-8, the Department approved the Company's energy efficiency goals as well as Fitchburg's performance and shareholder incentive methods.

FGE-2, at I-4).[10,11] In addition, Fitchburg presented a table listing savings and incentive payments, by program, with documentation (Exhs. FGE-1; FGE-2; DTE 1-1; DTE 1-3; DTE 1-2a; DTE 1-2b; DTE 1-7a; DTE 1-7b). Therefore, the Department finds that the Company has adequately demonstrated that it has met its performance goals, based on savings achieved, to the extent claimed. In addition, we find that in meeting its performance goals, Fitchburg has followed the Department's procedures in calculating its performance incentives for its 2001 and 2002 energy efficiency programs. Guidelines at § 5. Accordingly, based on the foregoing, the Department approves Fitchburg's shareholder incentive for 2001 of $73,315 and its shareholder incentive for 2002 of $80,840.

VI. ORDER

Accordingly, after due notice and consideration, it is

ORDERED: That the demand-side management savings estimates for Fitchburg Gas and Electric Light Company for the years 2001 and 2002 are hereby approved; and it is

FURTHER ORDERED: That Fitchburg Gas and Electric Light Company shall recover shareholder incentives associated with its demand-side management performance for 2001 in the amount of $73,315 and for 2002 in the amount of $80,840; and it is

---

10 The Department approved a design-level incentive rate of 4.25 percent for Fitchburg's 2002 shareholder incentives. D.T.E. 98-48/49-A (Phase II) at 6-8.

11 The Department has held that performance goals may reasonably be the subject of a settlement, but actual performance is a matter of fact and statistical analysis. Thus, performance incentives should not be subject to a settlement. D.T.E. 98-48/49 (Phase II) at 2, n.2.

FURTHER ORDERED: That Fitchburg Gas and Electric Light Company follow all directives in this order.

By Order of the Department,

\s\
___________________________________
Paul G. Afonso, Chairman

\s\
___________________________________
James Connelly, Commissioner

\s\
___________________________________
W. Robert Keating, Commissioner

\s\
___________________________________
Judith F. Judson, Commissioner

An appeal as to matters of law from any final decision, order or ruling of the Commission may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the Order of the Commission be modified or set aside in whole or in part. Such petition for appeal shall be filed with the Secretary of the Commission within twenty days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission may allow upon request filed prior to the expiration of the twenty days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the Clerk of said Court. G.L. c. 25, § 5.